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19910416**

**CPY - KOKE**

**- SUMU**

**DC - B07**

**FS - CPI**

**IC - A61K9/00 ; A61K47/42**

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**M1 - [01] M423 M431 M782 M903 R034 R052 V600 V616 V751 V752**

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**PA - (KOKE ) KOKEN KK**

**- (SUMU ) SUMITOMO SEIYAKU KK**

**PN - JP3118009B2 B2 20001218 DW200102 A61K9/00 006pp**

**- JP4364120 A 19921216 DW199305 A61K9/00 006pp**

**PR - JP19910083802 19910416**

**XA - C1993-017941**

**XIC - A61K-009/00 ; A61K-047/42**

**AB - J04364120 The prepn. is produced by simultaneously extruding (A) 10-40 w/w% collagen and/or gelation soln contg. at least one drug and (B) one or more of 10-40 w/w% collagen and/or gelation soln. or solns either contg. no drug or drugs of different concn. and/or kind from (A), through a multiple nozzle, pref. into gases.**

**- USE/ADVANTAGE - The prepn. gives a control led release rate, period or drug behavior in vivo and can be industrially produced.**

**- In an example, 2 w/w% aq. atherocollagen soln. (45g), IFN-alpha (5.6ml, 64, 000, 000 IU) and aq. human serum albumin (1.41ml, 71mg/ml) were blended and lyophilized. The lyophilizate was swollen with water, left in a refrigerator overnight and kneaded in a mortar to give a soln.--(A). Soln. (B) was prepd, from 2 w/w% aq. atherocollagen soln. (90g) and aq. human serum albumin (2.82ml) in a similar manner. Soln. (A) and (B) were separately charged into plastic syringes and defoamed by high-speed centrifuge. They were set to a double nozzle to supply soln, (A) in the central of the nozzle and soln.(B) in the outer layer and them simultaneuously extruded at the rate (A) : (B) = 1 : 2 to mould a rod. The rod was dried in a desiccator (RH 75%) for 72 hrs., further in a desiccator with silica gel for 24 hrs. This was cut into pieces to give minipellets (dia. =1.1mm) each contg IFN-alpha (1,000,000 IU(Dwg.0/0))**

**IW - PRODUCE MULTILAYER COLLAGEN GELATIN PREPARATION SIMULTANEOUS EXTRUDE COLLAGEN GELATIN SOLUTION CONTAIN DRUG COLLAGEN GELATIN SOLUTION CONTAIN NO DRUG DRUG MULTIPLE NOZZLE**

**IKW - PRODUCE MULTILAYER COLLAGEN GELATIN PREPARATION SIMULTANEOUS EXTRUDE COLLAGEN GELATIN SOLUTION CONTAIN DRUG COLLAGEN GELATIN SOLUTION CONTAIN NO DRUG DRUG MULTIPLE NOZZLE**

**NC - 001**

**OPD - 1991-04-16**

**ORD - 1992-12-16**

**PAW - (KOKE ) KOKEN KK**

**- (SUMU ) SUMITOMO SEIYAKU KK**

**TI - Prodn. of multilayered collagen and/or gelatin prepn. - by**

**simultaneous extrusion of collagen and/or gelatin soln. contg. drug(s)  
and collagen and/or gelatin soln. contg. no drug or different drug(s)  
using multiple nozzle**